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EXAMINER	
TSUI, WILSON W	
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2178	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/536,866	NIIKURA ET AL.	
	Examiner	Art Unit	
	WILSON TSUI	2178	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 April 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6,8-17 and 19-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6,8-17 and 19-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This non final action is in response to the RCE filed on: 04/14/08, and IDS filed on: 04/14/08.

2. Claims 1, 3, 4, 12, 14, 15, 22, and 23 are amended. Claims 7, and 18 are cancelled. Claims 1-6, 8-17, and 19-24 are pending. Claims 1, 12, and 21-24 are independent claims.

3. The 112 second paragraph rejections with respect to claims 2 and 13 are withdrawn, in view of applicant's arguments/remarks.

4. Claims 1 – 6, 8-10, 12-17, 19, and 21-24 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Min et al, in view of Ambalavanar et al.

5. Claims 11 and 20 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Min et al, and Ambalavanar et al, in further view of Huttenlocher et al.

Priority

6. Acknowledgment is made of applicant's claim for foreign priority (with respect to foreign application: Japan 2004-090064 03/25/2004) under 35 U.S.C. 119(a)-(d). The certified copy of the priority document is confirmed to be received.
Acknowledgment is made of applicant's claim for continuing data (with respect to the application being a 371 of PCT/JP05/05444 03/17/2005).

Information Disclosure Statement

7. The information disclosure statement (IDS) submitted on 04/14/08 is being considered by the examiner.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 1 – 6, 8-10, 12-17, 19, and 21-24 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Min et al (US Application: US 2002/0120634, published: Aug. 29, 2002, filed: Dec. 7, 2000), in view of Ambalavanar et al (US Patent: 5,717,842, issued: Feb. 10, 1998, filed: Aug. 23, 1996).

With regards to claim 1, Min et al et al teaches

A data reception unit for receiving data of a first format for respective pages (paragraph 0013: whereas data of a first image metadata is received)

A data conversion unit for converting the data of the first format into data of a second format (paragraph 0013: whereas a decoder converts the first image metadata into a generic format).

A page data management unit for managing the data of the first and second formats in first and second page data in association with each other (paragraph 0014: whereas a generic format is part of the management data)

A plurality of output processors, each for executing a respective output process for the first page data or for the second page data, independently (paragraph 0013: whereas each of a plurality of decoders are output processors, each executing a output /decoded process for page data independent from each other).

A control unit for managing whether or not any of said plurality of output processors which execute an output process with reference to the first or second page data refer to said page data management unit (paragraph 0014: output is executed upon application request (and the appropriate decoder used/implemented). Additionally, the control unit checks the reference to the page management/generic data unit, and removes the generic data/page-management-data as necessary (paragraph 0046)).

A page data management unit can also be deleted when *none of said plurality of output processors refers to said page data management unit, said output processes by said plurality of output processors are complete* (paragraph 0046: whereas a management unit/generic metadata can be explicitly deleted should the data be of no further use/(completed))However, Min et al does not expressly teach wherein said control unit deletes said page data management unit *under a condition that storage of the data of the first and second formats in the memory is complete,*

Ambalavanar et al teaches wherein said control unit deletes said page data management unit *under a condition that storage of the data of one or more formats in*

the memory is complete and reference to page data by the output processor is complete (column 14, lines 66-67, column 15, lines 1-8, Fig 12: whereas, images of a particular format are checked in storage to verify that they are completely stored, and referenced by a output processor (output processor/client processing print jobs)).
It would have been obvious to one of the ordinary skill in the art at the time of the invention to have modified Min et al's control unit and management unit (which manages first and second formats), such that the page management unit (which manages multiple formats) under a "completely stored-and-processed" condition; is deleted, when reference to page data by the output processor is complete, as similarly taught by Ambalavanar et al. The combination of Min et al and Ambalavanar et al would have allowed Min et al to have maximized storage of image data in one or more formats" (Ambalavanar et al, column 5, lines 10-15).

With regards to claim 2, which depends on claim 1, Min et al teaches *wherein said control unit generates said page data management unit in a memory in response to reception of the data of the first format for respective pages* (paragraph 0014: generic format is created)

With regards to claim 3, which depends on claim 1 or 2, Min et al and Ambalavanar et al similarly teaches *wherein said control unit monitors storage states of the data of the first and second formats in a memory, in a memory, and deletes the first or second page data in accordance with the storage states and a reference state by the plurality of*

output processors (paragraph 0034, 0035, 0041: whereas storage states of the first/original-image data, and second formats/abstracted-image data is managed/monitored in memory, such that the first or second page data is processed/released in accordance with storage states and reference states/application-request(s)).

With regards to claim 4, which depends on claim 3, Min et al teaches *wherein when an output processor issues an instruction of an output process after the first page data is deleted, said control unit controls said data conversion unit to convert the data of the second format into data of an output format suited to an output format of the output of the output processor* (paragraph 0013, 0014: whereas after first native format, a generic format is used, and then output is produced that is suitable to the requesting application/output application (paragraph 0038). Additionally, the generic format is deleted (as similarly explained in the rejection for claim 1), and the output format suited to an output format of the output processor (as also explained in Min et al, paragraph 0046 and 0047).

With regards to claim 5, which depends on claim 4, Min et al teaches *wherein said control unit controls said page data management unit to manage the data of the output format using third page data* (paragraph 0014: whereas, through page/data management, a third page data is produced such that the page data is readable by an output application)

With regards to claim 6, which depends on claim 5, Min et al teaches *wherein upon completion of use of the data of the output format by the output processor, said control unit controls said page data management unit to* process *the third page data* (paragraph 0014: whereas, proprietary/application-data/third-page-data is processed by an output application).

However, although Min et al teaches *third page data*, in the rejection for claim 5, Min et al does not expressly teach *delete* the third page data.

Yet, *deleting* a page of a particular format upon completion by the output processor is taught by Ambalavanar et al ((column 14, lines 66-67, column 15, lines 1-8, Fig 12: whereas, images of a particular format are checked in storage to verify that they are completely stored, and referenced by a output processor (output processor/client processing print jobs)).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to have modified Min et al's third page-format, such that the page management unit (which manages multiple formats) deletes the third page-format, when reference to page data by the output processor is complete, as similarly taught by Ambalavanar et al. The combination of Min et al and Ambalavanar et al would have allowed Min et al to have maximized storage of image data in one or more formats" (Ambalavanar et al, column 5, lines 10-15).)

With regards to claim 8, which depends on claim 3, Min et al teaches *wherein when said control unit determines that storage of the data of the first format in the memory is complete, said control unit permits said data conversion unit to start a data conversion operation from the first format to the second format* (paragraph 0013: whereas, upon storage of the data of the first format, the control process proceeds to perform data conversion from first format to the second format)

With regards to claim 9, which depends on claim 3, Min et al teaches *wherein said control unit monitors completion of the conversion operation of said data conversion unit and a storage state of the data of the second format in the memory, and permits a predetermined process for the data of the second format to execute in accordance with the storage state* (paragraph 0013, 0014, 0035, whereas upon completion of the conversion process, such that the second format is stored in memory, a predetermined process such as the predetermined process to execute/retrieve stored second format data by use of an abstraction interface is implemented).

With regards to claim 10, which depends on claim 9, Min et al teaches *wherein said page data management unit is generated for data of each page received by said data reception unit, and when data including a plurality of pages are received, said page data management unit manages the first and second page data while associating respective pages with each other* (paragraphs 0038, 0040, 0041: whereas, a plurality of input pages (each page comprises native metadata) are received and decoded, such that the

management unit/abstraction interface manages first and second page data while associating respective pages with each other)

With regards to claim 12, for a data processing method for processing data for respective pages, similar to the method performed by the apparatus of claim 1, is rejected under similar rationale.

With regards to claim 13, which depends on claim 12, for performing a method similar to the method performed by the apparatus in claim 2, is rejected under similar rationale.

With regards to claim 14, which depends on claim 12 or 13, for performing a method similar to the method performed by the apparatus in claim 3, is rejected under similar rationale.

With regards to claim 15, which depends on claim 14, for performing a method similar to the method performed by the apparatus in claim 4, is rejected under similar rationale.

With regards to claim 16, which depends on claim 15, for performing a method similar to the method performed by the apparatus in claim 5, is rejected under similar rationale.

With regards to claim 17, which depends on claim 16, for performing a method similar to the method performed by the apparatus in claim 6, is rejected under similar rationale.

With regards to claim 19, which depends on claim 18, for performing a method similar to the method performed by the apparatus in claim 10, is rejected under similar rationale.

With regards to claim 21, for a computer program for making a computer execute a data processing method of claim 12, is rejected under similar rationale as the rejection for claim 12 above.

With regards to claim 21, for a computer program for making a computer execute a data processing method of claim 13, is rejected under similar rationale as the rejection for claim 13, above.

With regards to claim 22, for a data processing apparatus performing a method similar to the apparatus of claim 1, is rejected under similar rationale.

With regards to claim 23, for a data processing method performing a method similar to the method performed by the apparatus of claim 1, is rejected under similar rationale.

With regards to claim 24, for a computer executable program embodied on a computer readable medium for making a computer execute data processing method similar to the method of claim 23, is rejected under similar rationale.

9. Claims 11 and 20 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Min et al (US Application: US 2002/0120634, published: Aug. 29, 2002, filed: Dec. 7, 2000), and Ambalavanar et al (US Patent: 5,717,842, issued: Feb. 10, 1998, filed: Aug. 23, 1996), in further view of Huttenlocher et al (US Patent: 5,884,014, issued: Mar. 16, 1999, filed: May 23, 1996).

With regards to claim 11, which depends on claim 7, Min et al teaches *wherein first format is one of a plurality of data formats including* JPEG data (paragraph 0040), and *the second format* (as similarly explained in the rejection for claim 1, and is rejected under similar rationale).

However, Min et al does not expressly teach the data of the second format *has a JBIG data format*.

Huttenlocher et al teaches the second format *has a JBIG data format* (column 26, lines 42-52: whereas JBIG is a secondary format through conversion).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to have modified Min et al's second format, such that it would have been a JBIG data format, as taught by Huttenlocher et al. The combination of Min et al, Ambalavanar et al, and Huttenlocher et al would have allowed Min et al to have "implemented a known encoding technique" (Huttenlocher, column 4, lines 20-25).

With regards to claim 20, which depends on claim 19, for performing a method similar to the method performed by the apparatus of claim 11, is rejected under similar rationale.

Response to Arguments

10. Applicant's arguments filed 04/14/08 have been fully considered but they are not persuasive.

11. With regards to claim 1, the applicant argues that "Min simply uses coders and decoders to convert back and forth between generic and native formats, and converts for each native format as necessary", [and thus] Min is seen to provide for management of each individual data format separately, and does not disclose or suggest a page management unit for managing data of first and second formats for respective pages in first and second page data in association with each other".

However, this argument is not persuasive since the claim language does not require how the data is managed, only that data is managed. Thus, since Min includes a generic format, and the generic format is a representation of data from a native format, then the native format data is managed/processed via generic representation/format (paragraph 0013, 0014). The generic format is a *single* representation of the native format, and the generic format acts as the management unit, as similarly explained above. Furthermore, the claim language does not require that the page management unit be necessarily a single component, and the examiner respectfully points out that the page management unit can be a combination of components.

12. The applicant secondly argues amended claim limitations that "Min is not seen to disclose or suggest deleting the page data management unit under a condition that (a)

none of a plurality of output processors refer to the page data management unit, wherein each output processor is for executing a respective output process for the first or second page data, and (b) the output processes by the plurality of output processors are complete". The examiner respectfully directs the applicant to the rejection for claim 1, for further explanation as to why Min teaches these limitations. Furthermore, the examiner respectfully points out that the claim language requires "under ***a*** condition", but the applicant appears to be arguing/requiring multiple conditions. Thus, should the applicant require multiple conditions, the examiner recommends that the claim language should be "under *condition**s***".

13. The applicant makes a third argument that "Ambalavanar is not seen to disclose or suggest determining how many output processors refer to a page data management unit or determining whether an output process for first and second page data of different formats by a plurality of output processors is complete, much less deleting a page data management unit under a condition that (a) none of a plurality of output processors refer to the page data management unit, wherein each output processor is for executing a respective output process for the first or second page data, and (b) the output processes by the plurality of output processors are complete".

Yet, this argument is not persuasive since the examiner interprets that each print job is an output process, and there are multiple print jobs taught in Ambalavanar (Fig 16). Thus, multiple output processors refer to a page data management unit. Furthermore,

the claim language requires "one or more formats in memory", and Ambalavanar is shown to teach at least one format in memory (as discussed above), and thus, the applicants argument for multiple formats is not persuasive. The examiner respectfully directs the applicant to the rejection for claim 1 above, for further explanation as to how the amended limitations are taught.

14. With regards to claims 12, 22, and 23 for being allowable since they include limitations similar to independent claim 1, is not persuasive since independent claim 1 has been shown/explained to be rejected.

15. With respect to the claims dependent upon the one or more independent claims being allowable since the independent claims are allowable; is not persuasive since the independent claims have been shown/explained to be rejected.

Conclusion

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to WILSON TSUI whose telephone number is (571)272-7596. The examiner can normally be reached on Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Hong can be reached on (571) 272-4124. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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